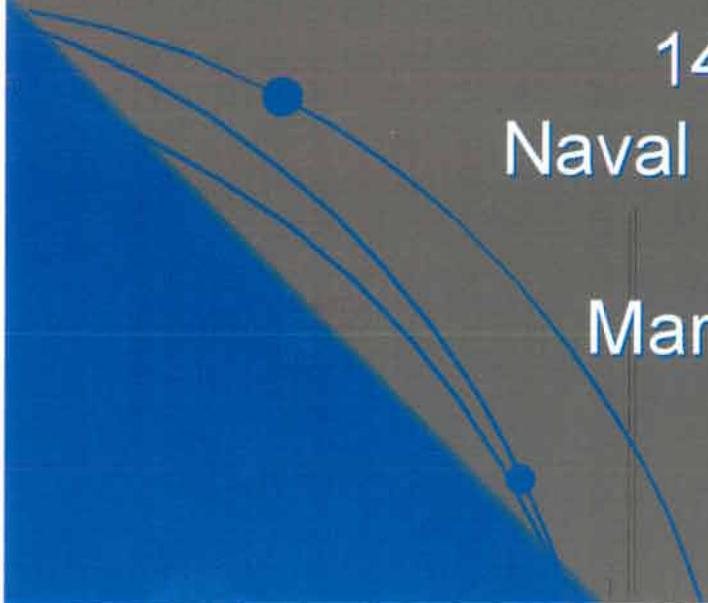


Results of Structural Testing for FCS Common Chassis Prototype Concept

14th Annual GVSS
Naval Postgraduate School
Monterey, CA
March 29-April 1 2004



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Briefing Outline

- Program Description
- Conclusions
- Recommendations/Path Forward
- FCS benefits

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Program Description

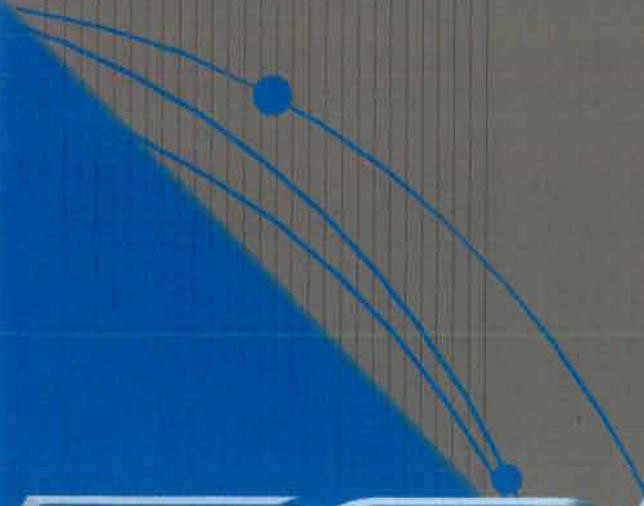


BEAM TESTING

SYSTEM TESTING

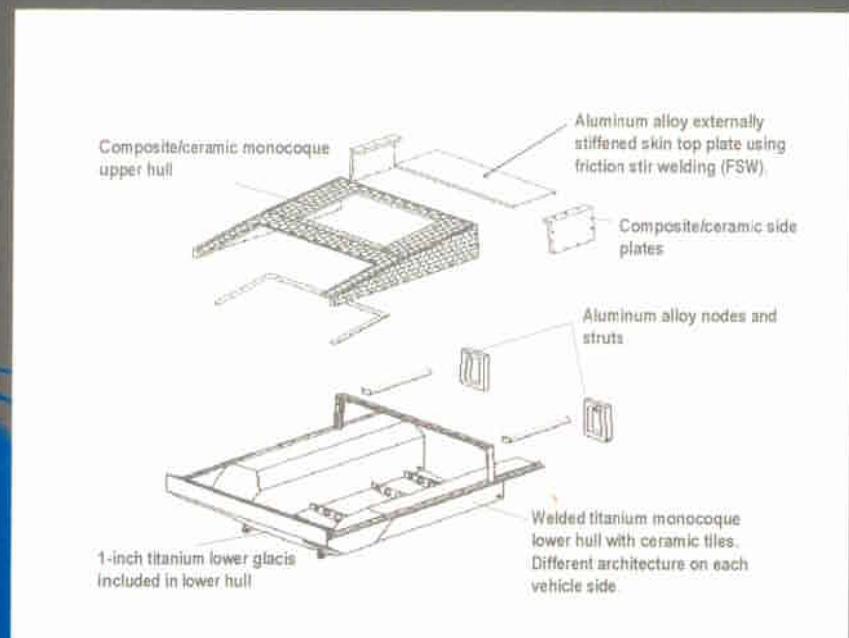
CORRELATION

MODELING &
SIMULATION
(M&S)



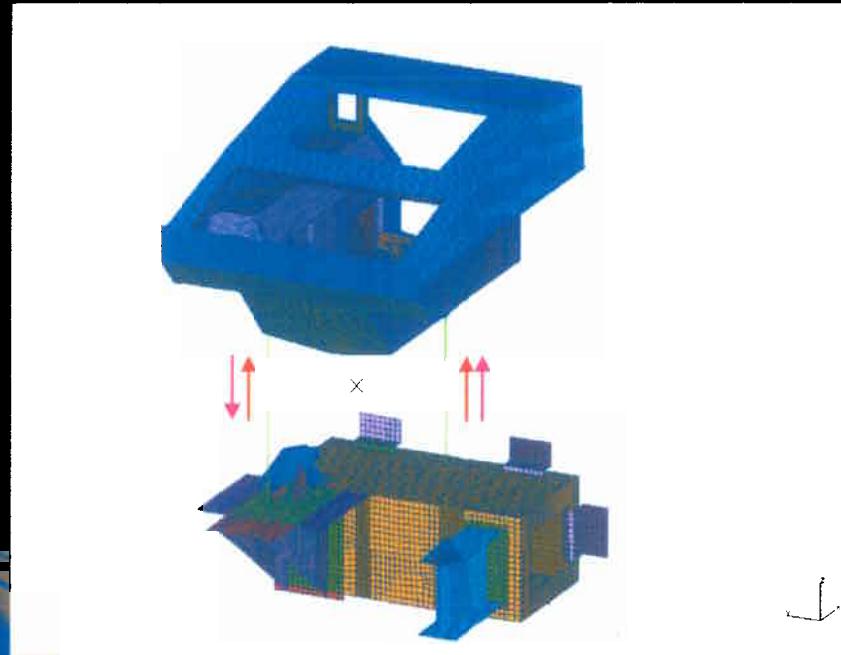
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X-2 Test Structure

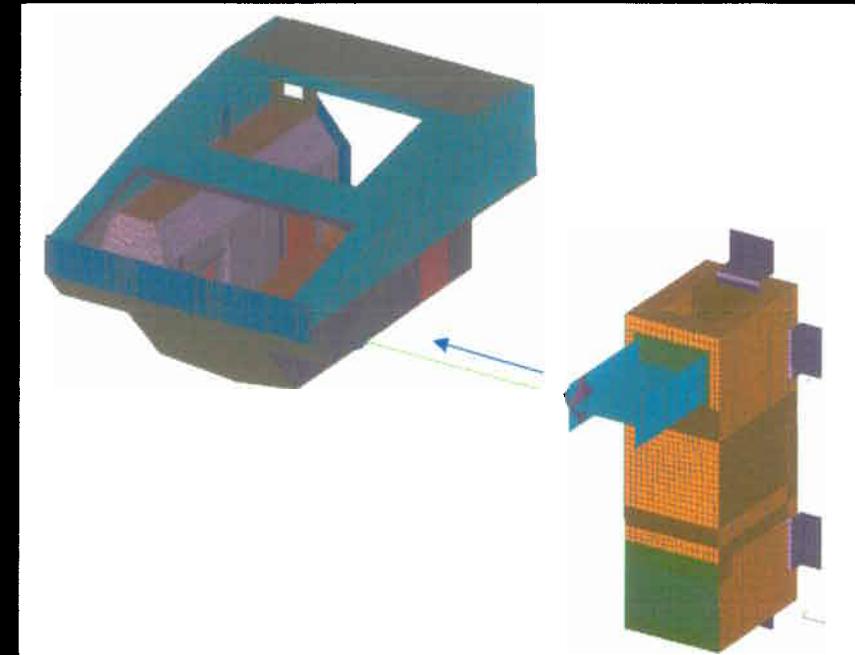


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Structural Tests Performed



Racking/Vertical



Horizontal

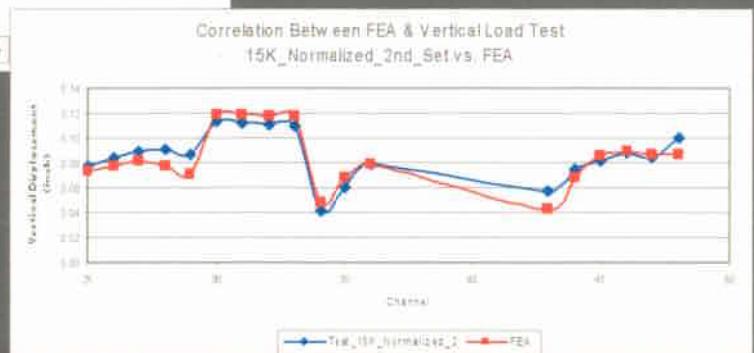
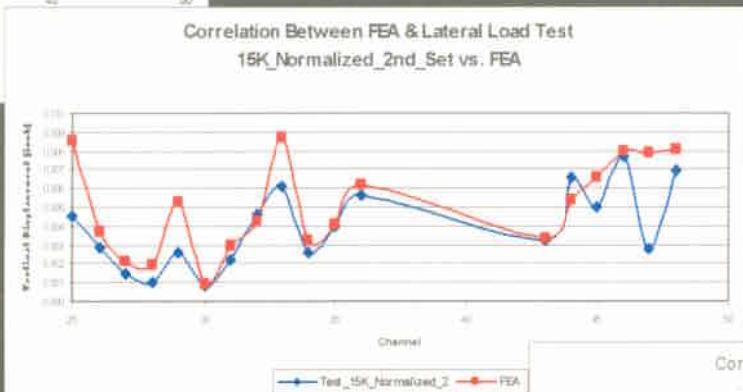
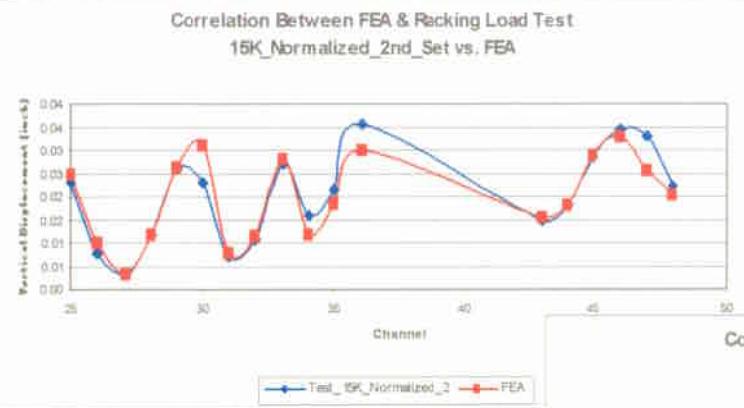
Maximum test loads were considered most severe

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Conclusions

- Correlation was successful



- Still issues of concern

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Conclusions (cont')

- Vehicle testing was successful
 - Structure withstood loads
 - Overall vehicle structure was still linear and elastic
 - Local failures occurred

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Recommendations

- More materials testing
 - Developmental tests needed for better characterization
- Further racking tests
 - Stiffen support structure
- Build/Test different structures
 - Space-frame structure

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Benefits to FCS

- Helps validate state of M&S technology on a vehicle hull structure
 - Tells the level of reliability that can be anticipated
- Testers working with Analyzers
 - Data exchange protocols can be established and refined

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More Information

- Hodges, Bogetti, Meldrum, and Smith,
“*FCS X-2 TEST SECTION: FINAL
REPORT*”, TARDEC, 2004
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